

REMARKS

In the Office Action, the drawings are objected to. Claims 4, 5 and 11 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 1, 8, and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Tasker et al. (GB Publication No. 2368574). Claims 1-4, 6 and 8-11 were rejected under 35 U.S.C. §102(b) as being anticipated by Ichihara et al. (JP Publication No. 05-116865). Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichihara et al. in view of Tasker. Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichihara et al. in view of Rickaby (International Publication No. WO 2004/000712).

The present invention concerns a stairlift that is configured to change the orientation of its platform relative to the supporting rail while it moves up along the stairs. In conventional stairlifts, the platform remains at a fixed angle to the rail at the point where it contacts the rail, at most following bends in the rail. At the most, a rotation is used at the start of the end of the ride to get on or off. In contrast the stairlift of the present invention rotates relative to the rail during the ride.

The Drawings

As to the feature of claim 3, Figure 1 already shows height and Figure 4 shows the “feature” of the required relation between the height and the steps in the form of a graph (see page 6, lines 8-19). Figure 4 shows rotation angles as a function

of position. The shaded area shows position-angle combinations at which collisions occur and the description at page 6, line 11 mentions that range 44 corresponds to a bend.

Regarding the narrow ports in claims 4, 5 and 11, Figure 3 shows the feature of a stairwell with a narrow part. Therefore, the objection to claim 4 should be overcome.

As to claim 5, the feature of two narrow straight parts is shown in Figure 5 (see page 8, lines 6-16).

The Claims

Claims 4, 5 and 11 have been amended to avoid the rejection under 35 U.S.C. §112, second paragraph.

GB 2,368,574 (Tasker) describes a stairlift that rotates the chair around a vertical axis at the start and/or end of the ride, in order to facilitate getting on and off (page 5, lines 21-24 of Tasker). Tasker describes rotational movement at the time of movement along the track as “clearly undesirable” (see page 6, lines 26-30). In fact, most of the text of Tasker is concerned with measures to prevent such rotational movement during the ride. In Tasker the user controls rotational movement (see page 1, line 16 and page 7, last paragraph and following) and the stairlift assembly has various provisions to disable such control during up or down movement along the rail.

JP 5-116865 (Ichihara) describes a stairlift wherein the chair rotates along with a bend in the rail. Motor M moves the platform along the rail and spring 15 keeps wheel 14 pressed against the rail by rotating the chair around a vertical axis. Although this results in rotation of the chair in an absolute sense (relative to the outside world), it should carefully be noted that the orientation relative to the rail at the position of the platform remains fixed. In Ichihara this is inevitable, because it is the orientation of the rail that determines the orientation of the platform.

In contrast, the present invention requires rotation of the angle of the platform relative to the rail dependent on position during movement. This distinguishes from Ichihara, because Ichihara teaches keeping a fixed angle relative to the rail. This distinguishes from Tasker which teaches rotation only at the ends of the rail and not during movement.

The present invention uses the rotation relative to the rail to avoid obstacles during movement up or down the stairs without taking up much space. See for example Figure 3, which shows that a bend is used to change the angle “phi” during movement, so that the platform is directed at the exit of the stair, in the case where the narrow parts of the stair do not allow rotation at the end of the stair. See also page 2, lines 19-26 of the application and page 5, lines 7 and following. Neither Tasker nor Ichihara teaches or suggest any need to do so. Tasker is merely concerned with getting on and off the stairlift, and discloses that this only requires user controlled rotation at the top and bottom of the stair, rotation elsewhere being

undesirable. Ichihara is concerned with keeping a fixed angle to the rail when the rail bends, not with causing deviations from that angle.

It is true that Tasker, by the very fact that he pays such considerable attention to prevention of rotation during movement, can be said to contemplate the possibility of such rotation during movement. But in Tasker such rotations would at most be the result of undesirable user operation. In contrast, the stairlift of the present invention itself provides for a drive arranged to effect such rotation during movement, entirely in contradiction with what Tasker teaches to be desirable.

Returning to the Office Action, points 8-10 argue for a '102 rejection based on Tasker. As part of this argument, the Examiner alleges that Tasker discloses a drive 16 to rotate the platform depending on the position along the rail during movement of the platform along the rail. However, Tasker only teaches rotation only at the ends of the rail, when movement has stopped. It is disputed that Tasker discloses rotation during movement. See page 6, last four lines of Tasker and page 8, lines 2-5.

Moreover, it should be noted that in Tasker the only dependence on position along the rail is that Tasker disables the use of the control switch 20 when the chair is not located at an end of the staircase. It is disputed that such disabling discloses rotating dependent on position along the rail.

Points 12-20 of the Office Action argue for a '102 rejection over Ichihara. Point 12 states that Ichihara teaches a drive M to rotate the platform relative

to the rail depending on the position. However, Ichihara's drive M only drives the platform to translate along the rail (it does not directly drive any rotation). In Ichihara, the rotation of the platform is a result of this translation, effected by a mechanism with spring 14 and wheel 14. Ichihara's mechanism with spring 14 merely has the effect of keeping the platform at a fixed angle relative to the rail at the position where the platform contacts the rail. That is, Ichihara has no drive that rotates the platform relative to the rail. On the contrary, the mechanism keeps a constant orientation of the platform relative to the rail at the point of contact.

Point 9 of the Office Action appears to misinterpret the word "progress". "Progress" refers to movement along the rail. Throughout Tasker it is specifically emphasized that rotation during movement along the rail should be prevented (see page 6, last four lines to page 9).

Similarly, with respect to point 10 of the Office Action, concerning claim 9, Tasker teaches a toggle switch for user control of rotation, not automatic control. Page 8, last paragraph and page 9, specifically disclose that a separate user action is needed to control rotation. Page 9, first full paragraph gives a reason why this is so.

The present invention concerns changing the orientation of the platform relative to the rail "en route" in order to avoid obstacles. Tasker only discloses rotation at the end of the staircase and Ichihara only discloses keeping a fixed orientation relative to the bending rail. Neither document appears to suggest any

need for further rotation. Therefore, the independent claims are also not obvious over Tasker and Ichihara.

It is respectfully requested that the initialed Form PTO-1449 filed with the Information Disclosure Statement of November 27, 2006 be transmitted to the undersigned attorneys.

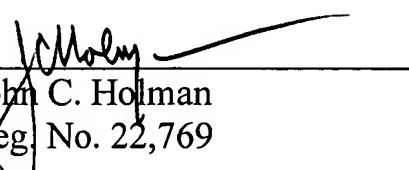
Based on the foregoing amendments and remarks, it is respectfully submitted that the present application should now be in condition for allowance. A Notice of Allowance is in order, and such favorable action and reconsideration are respectfully requested.

However, if after reviewing the above amendments and remarks, the Examiner has any questions or comments, he is cordially invited to contact the undersigned attorneys.

Respectfully submitted,

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